

Claims

What is claimed is:

- 1 sub
2 A2
- 09610100-063000
1. An architecture for monitoring access of descriptors over a network, the architecture comprising a descriptor mechanism for posting and storing descriptors and corresponding notify command frames submitted from networked control devices, wherein each descriptor comprises a unique node address identifying the control device submitting the descriptor and wherein the corresponding notify command frame instructs the descriptor mechanism to monitor access of data contained within the accessed by a competing control device.
 2. The architecture of claim 1, wherein the descriptor mechanism is a bulletin board subunit and the descriptor is a data entry.
 3. The architecture of claim 2, wherein the bulletin board subunit comprises a resource schedule bulletin board and wherein the data entries are resource schedule entries each comprising a start time, a duration time, and an interval time.
 4. The architecture of claim 3, wherein the resource schedule bulletin board substantially conforms to an AV/C standard protocol.

- 1 5. The architecture of claim 2, wherein the network comprises an IEEE 1394-1995
2 serial bus and wherein data entries are submitted to the bulletin board subunit
3 through the network comprising the IEEE 1394-1995 serial bus.
- 1 6. The architecture of claim 2, wherein the bulletin board subunit stores a node
2 address of the competing control device.
- 1 7. The architecture of claim 6, wherein the node address of the competing control
2 device is posted within node ID data fields of the corresponding notify command
3 frames.
- 1 8. The architecture of claim 2, wherein the bulletin board subunit generates a
2 response data frame and sends the response data frame to a unique node address
3 corresponding to the data entry when the competing control device accesses the
4 data entry.
- 1 9. The architecture of claim 8, wherein the response data frame comprises response
2 data that includes a node address of the competing device.
- 1 10. The architecture of claim 6, wherein the bulletin board subunit records and further
2 stores access activity of a competing control device when the competing control
3 device performs at least one activity selected from a group consisting of reading
4 the data entry, deleting the data entry and modifying a data structure within the
5 data entry.

1 11. The architecture of claim 10, wherein activity data is posted within a data field of
2 the corresponding notify command frame.

1 12. The architecture of claim 1, wherein the descriptor mechanism stores portions of
2 the descriptor that are accessed by the competing control device.

1 13. The architecture of claim 12, wherein the descriptor mechanism stores portions of
2 data that are accessed by the competing control device within a data field of the
notify command frame.

1 14. The architecture of claim 13, wherein the notify command frame corresponding to
2 the unique node address of the data entry is accessible by the control device
identified by the unique node address.

1 15. The architecture of claim 1, wherein corresponding notify command frames are
2 submitted after descriptors from networked control devices.

1 16. A method of monitoring a descriptor posted over a network from a remote control
2 device, wherein the descriptor comprises a unique node address identifying the
3 remote control device and wherein the descriptor is stored to a descriptor
4 mechanism, the method comprising:

- 5 a. submitting a notify command to the descriptor mechanism, wherein the
6 notify command instructs the descriptor mechanism to monitor the
7 descriptor for access activity by competing control devices; and
8 b. issuing a notify response to the remote control device when a competing
9 device accesses the descriptor.

1 17. The method of claim 16, wherein the descriptor mechanism is a bulletin board
2 subunit and the descriptor is a data entry.

1 18. The method of claim 16, further comprising recording and storing node addresses
2 of the competing device accessing the descriptor.

1 19. The method of claim 18, wherein the node addresses of the competing device is
2 recorded within a data field of the notify command frame.

1 20. The method of claim 18, wherein the notify response comprises data that encodes
2 for the node addresses of the competing device.

1 21. The method of claim 16, wherein the notify response is issued when the
2 competing device performs at least one activity selected from a group consisting
3 of reading the data entry, deleting the data entry and modifying a data structure
4 within the data entry.

- 1 22. The method of claim 16, further comprising recording the access activity of
2 competing devices.
- 1 23. The method of claim 22, wherein the access activity of the competing device is
2 recorded within a data field of the notify command.
- 1 24. The method of claim 17, wherein the bulletin board subunit is an AV/C resource
2 schedule bulletin board and further wherein the data entry is a resource request
3 comprising a start time, a duration time, and an interval time.
- 1 25. The method of claim 16, wherein the notify command frame is submitted after the
2 descriptor.
- 1 26. The method of claim 17, wherein the network substantially complies with a
2 version of an IEEE 1394-1995 standard.
- 1 27. A system for monitoring schedule entries posted to an AV/C resource schedule
2 bulletin board subunit, the system comprising:
3 a) a resource device including a dedicated AV/C resource schedule bulletin
4 board subunit; and
5 b) a plurality of control devices in communication with the resource device
6 and capable of posting the schedule entries to the AV/C bulletin board
7 subunit wherein each of the schedule entries include a unique node address
8 corresponding to the control device posting the request and wherein the

control devices are further capable of submitting notify command frames with schedule entries, wherein each notify command frame identifies a corresponding schedule entry, and further wherein the notify command frame instructs the resource device to monitor access of the schedule entry by the control device.

28. The system of claim 27, wherein the resource device records and stores node addresses of control devices accessing schedule entries after the schedule entries are posted to the resource schedule bulletin board.

29. The system of claim 27, wherein the resource device generates a notify response and sends the notify response to the unique node address of the schedule entry when the schedule entry is accessed by one of the control devices.

30. The system of claim 29, wherein the notify response is sent when the corresponding data entry is read, deleted or otherwise modified by a control device having a node address that does not correspond to the unique node address of the schedule entry.

31. The system of claim 27, wherein the resource device comprises a video receiver and transmitter.

1 32. The system of claim 27, wherein the posting device and the resource device are
2 coupled together through a network which substantially complies with a version
3 of an IEEE 1394 standard.

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